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signed June M. Mitchell  
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Docket No.: END9-2000- 0117US1

APPLICATION FOR UNITED STATES PATENT

To all whom it may concern:

Be it known that we, Katayoon (NMI) Atefi and Ralph James Foley, both citizens of Canada and currently residing in the provinces of Ontario and Quebec, respectively, in Canada, have invented new and useful improvements in a

**METHOD AND SYSTEM FOR ASSESSING INFORMATION  
TECHNOLOGY SERVICE DELIVERY**

of which the following is a SPECIFICATION:

END9-2000- 0117US1

# **METHOD AND SYSTEM FOR ASSESSING INFORMATION TECHNOLOGY SERVICE DELIVERY**

## **Cross Reference to Related Patents**

The present invention is related to the following documents, all of which are  
5 assigned to the assignee of the present invention and which are specifically incorporated herein  
by reference:

Patent Application Serial No. 09/625,108 (docket END9-2000-0026US1) filed July 25,  
2000 by Steven D. Barnes et al. and entitled "Method and System for System Integration", a  
document which is sometimes referred to in this document as the SI Patent.

10 Patent Application Serial No. 09/506,260 (docket RAL9-99-0166) filed February 17,  
2000 by Brenda Barth-Harvey et al. and entitled "Automated Management Process for Enterprise  
Resource Planning System Implementation", a document which is sometimes referred to in this  
document as the Management Process Patent.

## Background of the Invention

### Field of the Invention

The present invention relates to techniques for assessing delivery of information technology (IT) services to customers. More particularly, the present invention includes an improved system and method for evaluating the maturity of the IT service delivery system and for identifying factors which cause or contribute to a customer's perception of poor service. The present invention includes a IT service matrix which matrix rates the service in several key attributes according to a level of maturity and increasing customer satisfaction. .

### Background Art

The description of the present invention which follows is based on a presupposition that the reader has a basic knowledge of information technology (sometimes referred to as data processing) and the delivery of IT services to customers, whether the customers are members of the same corporate organization as the IT organization (in a captive IT facility) or in an outsourcing organization which is hired to provide IT services to a corporate organization (sometimes the IT function is partially outsourced and partially performed in-house). Such IT organizations frequently involve a significant cost to the corporation. This significant cost sometimes raises the question of whether the IT organization is worth the expense and whether it can be improved, which often entails a consulting engagement by an outside organization to review the IT services, identify weaknesses and propose changes which will deliver better IT services or reduce IT costs or some combination of the two.

One approach to evaluating the effectiveness of an IT operation is to focus on the processes and procedures which are employed by the IT operation itself. This is sometimes referred to as a production method, since it focuses on the production of IT deliverables in assessing the effectiveness and the adequacy of the IT operation. This is also an inwardly aligned evaluation does assist in evaluating the efficiency of the IT infrastructure by aligning the goals and initiatives across the enterprise's processes. It allows an emphasis on repeatability, consistency and robust process execution across the enterprise.

However, process assessment (looking at the processes used in the IT organization) may be a useful indicator of IT effectiveness but it is not as good an indicator of the satisfaction and value as perceived by the users of the IT services (the external customers who are using the IT services being provided by the IT organization).

Thus, the prior art systems for assessing information technology delivery systems have undesirable disadvantages and limitations which impact the effectiveness of the assessments and limit the scope of recommendations for improvements.

## 15 **Summary of the Invention**

The present invention overcomes the disadvantages and limitations of the prior art systems by providing a simple, yet effective, way of assessing the effectiveness of an information technology organization and for making suggestions for changes to improve the effectiveness of the IT services in the future.

The present invention uses a matrix of key factors and levels of satisfaction to determine where the current information technology organization is and where the customers would like it to be in the future. This matrix may be in the form of a generic matrix for all service assessments and allow for a quick and relatively simple assessment of the IT service.

5        The present invention also includes the option of a detailed set of questions to enable a detailed analysis of each of several service characteristics and attributes, allowing for a more in depth assessment of the IT service.

10        The present invention also includes detailed service assessment matrices including one for each service characteristic, with a row for each service attributes. These detailed assessment matrices allow for an even more detailed analysis of the IT service and providing of the most detailed and intensive analysis.

15        Since the tools of the present invention are not mutually exclusive, they allow for the mixing and matching. Under some circumstances, some of the tools may be used for parts of the analysis (for example, detailed matrices) for intensive analysis couple with a set of questions for an analysis of other factors which is less intense.

The present invention has the advantage that it focuses on the perception of the customers in evaluating the effectiveness of the IT delivery system and is therefor sometimes characterized as an evaluation of the delivery or outward manifestation of the IT system rather than an inward evaluation of the production system.

20        The present invention has the advantage that it allows for recommendations to be made for improving the perceived effectiveness of an IT system. That is, based on the users'

perceptions of the IT service, recommendations can be proposed for improving the service and increasing the perceived effectiveness of the IT delivery system.

The present invention has the advantage that, once the level of maturity has been identified for various service attributes, improvements to the service regarding one or more attributes can be proposed. A further advantage of the present invention is that it allows a clear understanding and communication of who the customers are and how effectively value (as perceived by the customers) is being delivered to them.

The present invention also has the advantage that the analyses promote alignment of the IT services with the business. It provides an insight in to the “why” of activities and provides for a base of agreement between the IT service supplier and the recipient of IT services, also referred to as the customer.

The present invention avoids the use of an inward or production focus, where the activities of the IT service provider are the chief focus of the analysis.

The present invention is a system and method for three related approaches to assessing the maturity of the IT services provided to a customer – (1) a generic assessment matrix which can be used to perform a quick and relatively simple analysis of the IT service; (2) detailed questions and directions for each service characteristic and attribute treated in this technique; and (3) detailed assessment matrices including a matrix for each of the service characteristics. The detailed questions of (2) provide a system which contains questions containing guidance and background for the context of the assessment matrices to assist in explaining the context and target of the various assessment attributes. The questions can be used in interviews and result in a slide show used during customer workshops to perform a medium depth assessment of the IT service delivery. The detailed assessment matrices outline different levels of implementation of

each of the service attributes (five levels in the representative example) and the matrices can be used during interviews or workshops or even as a general education on IT services.

Other objects and advantages of the present invention will be apparent to those skilled in the relevant art in view of the following description of the preferred embodiment, taken together  
5 with the accompanying drawings and the appended claims.

### **Brief Description of the Drawings**

Having thus set forth some of the limitations and disadvantages of the prior art and some objects and advantages of the present invention, other objects and advantages will be apparent to those skilled in the relevant art in view of the following description of the drawings illustrating  
10 the present invention of an improved routing system and method in which:

Fig. 1 is a block diagram illustration the distinction between IT services and IT processes which is useful in understanding the present invention and its environment;

Fig. 2 is a matrix of different engagement approaches with different type of assessment techniques to illustrate different approaches to analysis of IT services;

15 Fig. 3 is a matrix of different service attributes versus different level of customer satisfaction, as an example of a general IT service maturity assessment matrix;

Fig. 4 is a sample of service assessment questions for a service attribute;

Fig. 5 is a sample of an IT service maturity assessment matrix; and

Fig. 6 is a logic flow chart of the process used to assess the IT service (or a component  
20 thereof) using the present invention.

## Detailed Description of the Preferred Embodiment

In the following description of the preferred embodiment, the best implementations of practicing the invention presently known to the inventors will be described with some particularity. However, this description is intended as a broad, general teaching of the concepts of the present invention in a specific embodiment but is not intended to be limiting the present invention to that as shown in this embodiment, especially since those skilled in the relevant art will recognize many variations and changes to the specific structure and operation shown and described with respect to these figures.

Fig. 1 shows a process chart (for a single, yet representative process in a business activity) in an effort to illustrate the difference between an IT service and an IT process. An IT service may be defined as a specific IT function or output which provides customer value. It is a measurable "product" which is the basis for doing business with a customer and is delivered through a series of implemented business processes and/or activities. An example of an IT service is illustrated as "response to queries" identified as 102 in Fig. 1.

An IT Process is a collection of related activities that take inputs, transforms them, and produced outputs that support an enterprise goal. Implemented processes are enable through people, tools, and information. An example of an IT process (related to call management in the customer service or CSA function) is identified in Fig. 1 by the ring 104 which includes a block 106 where the call is received and logged, a block 108 where the call is analyzed, a block 110 where a call ticket is assigned, block 112 where the query is answered, a block 114 where the open call tickets are monitored and a block 116 where the call is closed. The remainder of Fig. 1



illustrates other levels of service and processes and identify the tools, both manual tools and automated tools which are used in the performance of the processes.

It would be useful at this time to provide a definition of two other terms which are used throughout this document: An activity is a specific collection of tasks organized around a commonly understood result, typically executed in a prescribed sequence. A service flow is a description of all the activities, in sequence, required to deliver a service. It includes the interprocess flows.

Fig. 2 is a chart which illustrates different engagement approaches and the use of different tools in completing an assessment. Across the top of the chart are the different tools available for use in an assessment and down are different types of assessments which can be performed. The different types of tools include (but are certainly not limited to) a generic matrix identified as column 202, simple questions in column 204, detailed questions in column 206 and detailed matrices in column 208. Several engagement approaches or types of analyses are listed going down the page: a quick, general assessment in line 210, a medium depth assessment in line 212, an in-depth, interview-based assessment in line 214 and an in-depth, workshop-based assessment in line 216. The respective assessment components which might be chosen for each of these types of engagement approaches is illustrated by a check mark in the intersection of the column and line (or row) in the chart of Fig. 2.

Fig. 3 is a simple matrix showing different levels of IT service maturity based on key attributes, with five categories being shown in this matrix. Five columns are shown in levels of increasing maturity, from ad hoc in column 302 and repeatable in column 304 to consistent in column 306, exceptional in column 308 and world class in column 310. Going down the page, a first line or row 312 deals with policies and procedures, a second row 314 deals with team work,

a third row 316 deals with consistency of delivery, a fourth row 318 deals with defect handling and a fifth row 320 deals with use of results. For each row, an example of each level of maturity is provided for each attribute. as a result of assessing the maturity, an IT organization may have different levels of maturity for different attributes. The difference may result from different priorities or differences in implementation, but, in general, the goal is to reach a higher level of maturity for each attribute and to improve on those attributes where the results are relatively less mature. So, an organization which has exceptional results in most categories may wish to focus on those where the results are merely consistent while an organization which is at the repeatable level may have an attribute in which it exhibits "consistent" results and would be more concerned about other areas. Obviously as the organization moves to the right in Fig. 3 it is increasing customer satisfaction, moving from meeting customer expectations in the middle to exceeding customer expectations at the right (and falling short of customer expectations to the left) -- all at a price of course, and some organizations and some customers are not willing to pay for world class services, at least in some areas.

The number of key attributes in a matrix of the type used in an assessment using the system of Fig. 3 may have between ten and twenty attributes, although a lesser number or a greater number could be used to advantage. One focus in this process is to determine whether the provider and the customer have a common understanding of the scope and objective of the IT service being provided and to identify any disparity between the expectations.

Fig. 4 illustrates sample set of detailed assessment questions to provide a more detailed insight into the various attributes than is provided by the matrix of Fig. 3. In this case, the detailed assessment questions are provided for only one service attribute, in this case "definition and understanding of the service", as an illustrative example of a part of the set of questions. A

similar set of questions would be provided for other service attributes (and there may be many such service attributes). In each case, there is a focus area (column 404) associated with each attribute (listed in column 402) along with a set of descriptions and considerations in column 406 and an example in column 408. For a single service attribute there will usually be several focus areas, each set forth in a line in Fig. 4, such as lines 410, 412, 414, 416 and 418. Thus, in line 414, the focus area is whether the scope of service is defined and the considerations in column 406 include where the service inclusions and exclusions are clear, agreed to by the parties and documented. The answers to these questions will lead the assessment to a determination of the level of maturity as well as identifying areas for improvement. For example, if there is a disagreement on the scope of the service between the provider and the customer, it will be hard to have a mature service and the remedy suggested may be that the provider and the customer agree on the scope of the service and document it. One key aspect to assessing a service is to note the gap between the reality and the perceptions as seen by the customer and by the provider.

Fig. 5 is a third example of an assessment approach where detailed matrices are provided for assessing the level of maturity of a service. Fig. 5 is similar to Fig. 3 in providing different levels of maturity across the horizontal columns and a service attribute in the vertically-arranged rows but Fig. 5 is meant to provide a more detailed set of attributes and allow for an identification of the current level of service (labeled as “now” in column 510) as well as a desired level of service in column 520, (labeled as “goal”). A comparison of the “now” results with the “goal” for each service attribute can lead quite easily to conclusions about areas for improvement (where the now level of service is less than the goal level of service) as well as areas for possible economy (where the now level of service in column 510 exceeds the goal level

of service in column 520). In short, the IT organization should be using resources in areas which are important to the business objectives of the organization and not on achieving results without regard to the priorities of the organization. In this manner, the objectives of the IT organization in delivering its services may become better aligned with the objective of the organization as a whole.

Fig. 6 is a flow chart illustrating the logical flow of the information technology service assessment of the present invention using the elements and tools described above to provide an analysis of the current state of IT service and recommendations for improving the service.

Starting at block 602, the consultant and the customer identify the service or services which are to be assessed. This may be the entire IT operation with all of its many services or a selected subset of those services, based on the time and money available for study or a perception of things which are in greater need of attention. For example, an IT service may provide data processing applications for inventory control, financial reporting, payroll and computer aided design and manufacturing (CADAM), among other applications. If the cost in time and effort is too great to analyze all of the foregoing, it may be determined that inventory control has the greatest potential for service improvements and other benefits to the business and that service may be analyzed first.

Next, at block 604, the consultant determines the assessment technique(s) to be used. This may be a generic matrix as presented and discussed in connection with Fig. 3, detailed questions as presented and discussed in connection with Fig. 4, detailed matrices as discussed in connection with Fig. 5 or some combination of the techniques. Thus, in an example, the consultant has two formats (matrices and questions) available and each is available in a simple form and in a detailed form, although in practice, multiple levels could be developed between

the simple and the detail to accommodate any desired level of analysis. At block 606 the assessment tools are reviewed and appropriate tools are selected for the assessment. Next, the service attributes are selected at block 608 and modified at block 610 to fit the circumstances. Depending on the type of service being assessed and the level of that assessment, it may not be necessary to ask all the questions for an attribute or to evaluate all the attributes of each service. For example, services such as "ensuring availability of servers" may not need to focus on a human interaction as much as a services which relies on people for the delivery of that service.

At block 612 the data sources are determined and at block 614 the services are assessed using the selected technique -- either the matrix or questions. It is essential to understand the views of the provider and the customer in doing the assessment, but the information may be captured through various techniques. Where workshops are the preferred means of gathering information, then matrices may be more suitable. Where customer viewpoint's are sought by questions, it may be necessary to reword the questions to make them understandable by the customer - preferably in language which is easily understood by the customer being interviewed.

Following the gathering of information in the assessment of block 614, the facts and findings are consolidated at block 616, recommendations and conclusions are set out in block 618 and the results are reported at block 620.

Of course, many modifications of the present invention will be apparent to those skilled in the relevant art in view of the foregoing description of the preferred embodiment, taken together with the accompanying drawings. For example, the present invention is not limited to the types of analysis tools which are described above and other tools may be used in addition to or in place of the matrices and questions disclosed. For example, a customer may maintain a log which provides useful information regarding the customer complaints and praise for the IT

services and this log may provide some useful information and avoid having to ask questions about the state of the IT service as perceived by the users. The levels of service may also be an indicator of the satisfaction or dissatisfaction with the IT services. Some of the features and elements of the present invention may be useful without the corresponding use of other features and elements. Additionally, many modifications can be made to the system implementation and the method of presenting conclusions and recommendations. Accordingly, the foregoing description of the preferred embodiment should be considered as merely illustrative of the principles of the present invention and not in limitation thereof.

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